UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/299,596	04/27/1999	TONG HYONG LEE	0630-0913P	3472

2292 7590 09/12/2005		EXAMINER
BIRCH STEWART KOLASCH & BIRCH		KARMIS, STEFANOS

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

ART UNIT	PAPER NUMBER
3624	

DATE MAILED: 09/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *13 June 2005*.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *3-27* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *3-27* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *18 August 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☒ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. *6/9/05* .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This communication is in response to Applicant's amendment filed 13 June 2005.

Status of Claims

2.   Claims 17 and 27 are currently amended. Claims 28-33 are currently cancelled.

Claims 3-16, 18, 23-24 and 2 have previously been amended. Claims 1 and 2 are

previously cancelled. Claims 22, 25 and 33 have been left as originally filed. Therefore

claims 3-27 are under prosecution in this application.

Drawings

3.   The drawings were received on 18 August 2004. These drawings are accepted.

Response to Arguments

4.   Applicant's arguments filed 13 June 2005 have been fully considered and are

persuasive. Therefore, the rejection has been withdrawn. However, upon further

consideration, a new ground(s) of rejection is made and discussed below.

    Applicant's arguments with respect to claims 3-27 have been considered but are

moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   The text of those sections of Title 35, U.S. Code not included in this action can be

found in a prior Office action.

7.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating
            obviousness or nonobviousness.

8.   Claims 3, 4, 7, 10-14, 16-22, 26 and 27 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Janning et al. (hereinafter Janning) U.S. Patent 6,446,049 in

view of Takami et al. (hereinafter Takami) U.S. Patent 6,536,661.

        Claims 3, 10, 16, 17, and 26, Janning teaches an apparatus for transmitting digital

information and electronic money comprising: a radio signal receiving block for

receiving a radio signal, and automatically determining whether the received radio signal

corresponds to general information or balance storing information (column 28, lines 19-

52 and column 29, lines 5-36); a memory block for storing a storing amount, a content,

and certification information (column 28, lines 30-33); a modulation and demodulation

unit for implementing a signal transmitting and receiving operation with a card storing

unit (column 28, lines 24-29); a computation logic block for comparing a serial number

extracted from the received signal with a previously stored serial number if it is

determined that the received signal corresponds to balance storing information and is a

proper signal (column 28, lines 44-53 and column 29, lines 5-22); and a non-contact

block for storing a balance storing amount into the memory block using a card storing

unit and reading a balance storing amount of the memory block when paying the money

(column 23, lines 14-33). Janning fails to teach storing the balance string extracted from

the radio signal after the comparing of the extracted serial numbers. Takami teaches an

electronic money transaction system in which a radio transmitter is used and ID's from

the radio transmitter are compared to approve electronic money information. Further,

after the ID comparison, the IC card stores the transmitted electronic money information

into the electronic money information memory (column 12, lines 32-42). It would have

been obvious to one of ordinary skill in the art at the time of the Applicant's invention to

modify the teachings of Janning to include storing the electronic money information as

taught by Takami because Janning already teaches memory for storing billing

information (column 11, lines 30-44). Storing the balance information after the number

(ID) comparison is approved would update the billing information for the next

transaction, which has to reference the memory.

Claim 4, Janning fails to teach storing the balance string extracted from the radio

signal after the comparing of the extracted serial numbers. Takami teaches an electronic

money transaction system in which a radio transmitter is used and ID's from the radio

transmitter are compared to approve electronic money information. Further, after the ID

comparison, the IC card stores the transmitted electronic money information into the

electronic money information memory (column 12, lines 32-42). It would have been

obvious to one of ordinary skill in the art at the time of the Applicant's invention to

modify the teachings of Janning to include storing the electronic money information as

taught by Takami because Janning already teaches memory for storing billing

information (column 11, lines 30-44). Storing the balance information after the number

(ID) comparison is approved would update the billing information for the next

transaction, which has to reference the memory.

Claim 7, the non-contact block includes a modulation and demodulation unit for

performing a signal transmitting and receiving operation with a card storing unit or a card

reader; and a non-contact computation unit for storing a balance storing data into the

memory block at the modulation and demodulation unit in the case of the balance storing

operation, reading the balance storing data stored in the memory block in the case of the

payment and transmitting the read data to the modulation and demodulation (column 9,

line 59 thru column 10, line 32).

Claim 11, the computation logic block is designed to receive first and second

balance storing information from the radio signal receiving block and store the amount

data into the memory block only when the balance storing information is determined to be proper information (column 9, line 59 thru column 10, line 32 and column 28, lines 19-52).

Claims 12 and 13, the process comes to completion when the logic block is designed to stop the service of the terminal when a proper first balance account information is received from the radio signal receiving block or when a balance storing cancellation information is received from the radio signal receiving block during the balance storing operation (column 9, line 59 thru column 10, line 41).

Claim 14, the computation logic block includes a control means for decrypting a balance storing information based on a radio transmission method. Janning fails to teach storing the balance string extracted from the radio signal after the comparing of the extracted serial numbers. Takami teaches an electronic money transaction system in which a radio transmitter is used and ID's from the radio transmitter are compared to approve electronic money information. Further, after the ID comparison, the IC card stores the transmitted electronic money information into the electronic money information memory (column 12, lines 32-42). It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the teachings of Janning to include storing the electronic money information as taught by Takami because Janning already teaches memory for storing billing information (column 11, lines 30-44). Storing the balance information after the number (ID) comparison is approved would

update the billing information for the next transaction, which has to reference the

memory.

Claim 18, determining the balance storing information, the information is

determined to be a balance storing information when there is a certain pattern signal in

the received radio signal (column 28, lines 19-52).

Claim 19, the step of various certification includes reading a counter value

contained in the balance storing information if it is determined that the serial numbers are

the same and determining whether the read counter value is the same as a counter value

of a function for the previously stored encryption; determining whether the serial key

value outputted via the encryption process in which the counter values are the same as the

previously stored key value; and determining that a subscriber is a proper subscriber

when the key values are the same (column 28, lines 19-52).

Claim 20, the decryption process of the balance storing information is

implemented when the counter value extracted from the balance storing information is

the same as the counter value for the previously stored decryption (column 28, lines 19-

52).

Claim 21, summing a current balance storing amount and a recent radio balance

storing amount to obtain a first summed amount if the subscriber is a proper subscriber

and determining whether the first summed amount is below a certain amount;

determining whether the first summed amount obtained is equal to the second summed amount contained in the balance storing information based on the radio transmission method if the first summed amount is below the certain amount; storing the balance storing data if the first summed amount is equal to the second summed amount; and determining the signal as a balance storing error if the first summed amount is greater than a certain amount or the first summed amount is not equal to the second summed amount (column 27, lines 32-51).

Claim 22, Janning fails to teach storing the balance string extracted from the radio signal after the comparing of the extracted serial numbers. Takami teaches an electronic money transaction system in which a radio transmitter is used and ID's from the radio transmitter are compared to approve electronic money information. Further, after the ID comparison, the IC card stores the transmitted electronic money information into the electronic money information memory (column 12, lines 32-42). It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to modify the teachings of Janning to include storing the electronic money information as taught by Takami because Janning already teaches memory for storing billing information (column 11, lines 30-44). Storing the balance information after the number (ID) comparison is approved would update the billing information for the next transaction, which has to reference the memory.

Regarding claim 27, Janning teaches an apparatus for transmitting digital

information and electronic money comprising: a radio signal receiving block for

receiving a radio signal, and automatically determining whether the received radio signal

corresponds to general information or balance storing information (column 28, lines 19-

52 and column 29, lines 5-36); a memory block for storing a storing amount, a content,

and certification information (column 28, lines 30-33); a computation logic block for

comparing a serial number extracted from the received signal with a previously stored

serial number if it is determined that the received signal corresponds to balance storing

information and is a proper signal (column 28, lines 44-53 and column 29, lines 5-22);

setting a temporary service stop state if it is determined that the received balance storing

is a proper signal and waiting to receive second balance information (column 21, line 41-

61); performing a certification of the second balance information when the second

balance information is received and determining whether the second balance information

is a proper signal (column 21, lines 41-61);

Wherein said certification step includes: extracting the storing request amount

from the first balance information, summing the thusly extracted amount and the balance,

and determining whether the summed amount is greater than the storing limit amount;

encrypting the value as a certain key value when the summed amount is the same or is

smaller than the storing limit amount and determining whether the value equals the value

extracted from the first balance information, said certain key value is provided from a

second certification and not from a radio communication service provider and said certain

key value is previously stores; and encrypting the first balance information as a certain

key value when the encrypted value is equal to the extracted value and changing to a

decimal value and displaying the decimal value; formatting the data contained in the

second balance storing information and encrypting using a certain key value of the

certification provider; determining whether the encrypted value is equal to an encrypted

value contained in the second balance storing information; and determining that the

signal is a proper signal if the encrypted values are equal; wherein said encryption step is

performed using a certain key value provided from the first and second certification

providers (column 9, line 41 thru column 10, line 33). Janning fails to teach storing the

balance string extracted from the radio signal after the comparing of the extracted serial

numbers. Takami teaches an electronic money transaction system in which a radio

transmitter is used and ID's from the radio transmitter are compared to approve electronic

money information. Further, after the ID comparison, the IC card stores the transmitted

electronic money information into the electronic money information memory (column 12,

lines 32-42). It would have been obvious to one of ordinary skill in the art at the time of

the Applicant's invention to modify the teachings of Janning to include storing the

electronic money information as taught by Takami because Janning already teaches

memory for storing billing information (column 11, lines 30-44). Storing the balance

information after the number (ID) comparison is approved would update the billing

information for the next transaction, which has to reference the memory.

9.   Claims 5, 6, 8, 9, 15 and 23-25 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Janning et al. (hereinafter Janning) U.S. Patent 6,446,049 in view of

Takami et al. (hereinafter Takami) U.S. Patent 6,536,661 in further view of Davis et al.

(hereinafter Davis) U.S. Patent 6,105,006.

Regarding claims 5, 6, 8, 15 and 23-25 Janning and Takami teach a display unit

for displaying general information or balance storing information as a character or digit.

Janning and Takami teach radio frequencies to send signals to customers to inform them

of financial information. Janning and Takami fail to teach a tone signal generator for

generating a call sound or an error sound during the balance storing operation by the

control means. Davis teaches a financial messaging system over radio frequency in

which audio signals are used to signal error messaging during the transaction and service

is stopped with improper signals (column 11, line 59 thru column 12, line 5 and column

23, lines 27-38). Therefore it would have been obvious to one of ordinary skill in the art

at the time of the Applicant's invention to modify the teachings of Janning and Takami

since both Janning and Takami and Davis teach storing electronic money with the use of

radio frequency and comparing pertinent encrypted data to complete transactions. There

is sufficient motivation to combine references because it provides an efficient manner for

communicating messages to users for operations important to a customer and provide

common auditory signals for unsuccessful transactions that a customer would be familiar

with and easily comprehend.

Claim 9, Janning teaches the control means is designed to decrypt an output signal

of the radio signal receiving block, extract a certification information if there is a service

stop signal, disables the memory block when the extracted certification information is

coincided with the previously stored certification information, and stop the service of the

card (column 9, line 59 thru column 10, line 32).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefano Karmis whose telephone number is (571) 272-6744. The examiner can normally be reached on M-F: 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on (571) 272-6747. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully Submitted
Stefano Karmis
01 September 2005

VINCENT MILLIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600